CALIFORNIA COASTKEEPER ALLIANCE

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January 28, 2011

Ms. Terry Macaulay
29 Delta Stewardship Council
980 Ninth Street, Suite 1500
Sacramento, CA 95814 32

VIA ELECTRONIC MAIL: deltaplanscoping@deltacouncil.ca.gov

RE: Scoping Comments on Draft Environmental Impact Report for the Delta Plan

Dear Ms. Macaulay:

The California Coastkeeper Alliance[1] (CCKA) represents and acts on behalf of 12 Waterkeeper organizations[2] working to protect the health of California's waterways from the Oregon border to San Diego. On behalf of the Alliance and its Waterkeeper members, we welcome the opportunity to comment on the Delta Stewardship Council's "Notice of Preparation: Draft Environmental Impact Report for the Delta Plan"[3] (Plan DEIR). As demonstrated by the extensive (and appropriate) Proposed Planning Area depicted in Figure 1 of the Plan DEIR, the health of the Delta directly and significantly impacts the heath of California's waterways and water supplies as a whole. Accordingly, the Plan DEIR is of great importance to CCKA and California's Waterkeepers.

We have signed on to, and incorporate by reference, the joint comments submitted to the Delta Stewardship Council (Council) dated January 25, 2011 on behalf of a broad coalition of environmental, environmental justice and fishing groups ("Joint Letter"). In this current, supplemental letter, we take the opportunity to:

- expand on the recommendation in the Joint Letter with regard to establishing water rights for waterways, and
- discuss an additional issue not raised in the Joint Letter due to time constraints – specifically, the need to enhance water quality protections to safeguard the state's supply of clean water. This issue will be expanded upon in a future Joint Letter.

We look forward to working with the Council to incorporate these recommendations into the final Delta Plan and ensuring their implementation for the benefit of California's water future.

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[1] www.cacoastkeeper.org.
[2] http://www.cacoastkeeper.org/waterkeepers/california-waterkeepers.
[3] http://deltacouncil.ca.gov/docs/DSC_Notice_of_Preparation_120910.pdf.

ESTABLISH WATER RIGHTS FOR WATERWAYS

First, as noted in the Joint Letter, we urge the Council to examine closely and update the foundational assumptions on which the state's current water governance system – including its Delta water governance system – rests. Despite the "co-equal goals" language in the Plan DEIR and the code, the current water rights allocation system effectively establishes the environment's water on a second tier status, below essentially all human uses. This governance system conflicts with ecological science, which demonstrates that the needs of Californians and our environment must be considered together. If water rights are to be the accounting system by which water is allocated, then the law must reflect the science: legal water rights must be developed, allocated and enforced to support water needs for healthy ecosystems and a healthy California.

As CCKA discussed in some detail in comments submitted to the Little Hoover Commission during its review of water governance in California (appended as Attachment A), our governance system currently addresses ecosystem water needs only indirectly, through such methods as conditions in permits, (unenforced) requirements to prevent "waste and unreasonable use," Water Code Section 1707 water transfers, the public trust doctrine, and application of the Endangered Species Act (ESA). None of these otherwise important tools are actual water *rights*, however. The result to date has been ecosystem water needs being consistently relegated to a tangential role in state water planning, until the ecosystems or their non-human inhabitants are at the brink of collapse. That is when the ESA hammer falls – abruptly, with little foresight, and often too late.

Unless California is willing to write off fish and Delta-dependent wildlife for our children and grandchildren, California needs a legal system that allows the state to plan effectively for the water needs for *both* Californians and California's ecosystems. The dangerously well-trod path of "use, overuse, environmental decline, then hasty and unplanned reaction" can begin to be broken by granting ecosystems the right to be at the planning table from the beginning, at a level truly "co-equal" to human water uses – rather than at the end when the damage is done. If water rights are to be the measure by which water is allocated in the state, then ecosystems also must be granted water rights, which can then be enforced by *independent* legal guardians representing the ecosystems' rights. The state could develop a process for selecting and funding (*e.g.*, through fees on water diversion and use) such independent guardians to implement and enforce ecosystem water rights. Given the state's long experience with the use of guardians in other legal contexts, extension of the concept to ecosystems should be relatively straightforward.

Legal water rights for ecosystems must be paired with identified water sources to be effective. Given the significant over-allocation of water rights in the state on paper, and the unknown amount of water diverted under riparian and pre-1914 rights, this task may be complex and take some time. It is not, however, insurmountable in light of the numerous existing legal tools that the state could use if it chooses to plan wisely, rather than continue to react to the courts as the effective arbiters of and decisionmakers for the state's water policies.

The process for establishing ecosystem water rights could begin immediately with the State Water Resources Control Board's flow criteria, adopted to protect the Delta ecosystem.[4] Significant research has been done over the years in assessing overall fish and ecosystem needs elsewhere in the state; this too could be compiled and assessed for relevant waterways on a prioritized basis. Legal water rights supporting these identified water needs could then be accounted for through such options as reviewing unexercised rights, making "waste and unreasonable use" determinations,[5] conducting adjudications, working with the federal government regarding effective allocation of federal water rights, assessing rights and sources associated with "new" water, and taking advantage of numerous other strategies. Formalizing and effectuating water rights for ecosystems in this way will ensure that waterway needs are considered up front, that planning is therefore effective and certain, and that water is shared to the maximum benefit of the state and its ecosystems as a whole.

ENHANCE WATER QUALITY CONTROLS AND ENFORCEMENT MEASURES

As noted above, due to time constraints the January 25th Joint Letter does not discuss water quality issues for purposes of the Delta Plan DEIR Scoping process. This issue will be addressed in further such joint communications; as a placeholder, we urge the Council to recommend significant enhancement in the implementation and enforcement of state and federal water quality laws in the Delta and surrounding watersheds. The Council to date has focused somewhat more on water supply and water rights issues, but water quality is of equal importance to the health of the state's waterways and ecosystems.

For example, the Delta Independent Science Board's just-released Delta Stressors Memo[6] highlights pesticide pollution as a key Delta stressor. Contamination from pollutants such as pesticides currently harms and kills fish and degrades ecosystems even at low *and legal* concentrations. For example, a study by NOAA and Washington State found that five of the most common pesticides used in California and the Pacific Northwest – diazinon, malathion, chlorpyrifos, carbaryl and carbofuran – act in "deadly synergy" by suppressing an enzyme that affects the nervous system of salmon.[7] Even where exposures to a single chemical did no harm, pairing chemicals lowered enzyme activity, sometimes fatally. Scientists concluded that "[s]ingle-chemical risk assessments are likely to underestimate the impacts of these insecticides on salmon in river systems where mixtures occur." In other words, even if current laws are

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[4] SWRCB, "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem," (Aug. 3, 2010), at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final_rpt080310.pdf.

[5] CCKA's comments on the Delta Watermaster's report, "Reasonable Use Doctrine and Agricultural Water Use Efficiency" (Jan. 2010), are included as Attachment B.

[6] Memorandum from Delta Independent Science Board to Delta Stewardship Council, "Addressing Multiple Stressors and Multiple Goals in the Delta Plan," Attachment 2, p. 4 (Jan. 26, 2011), available at: http://deltacouncil.ca.gov/delta_science_program/isb/isb_meetings.html (highlighting "pesticide release" from agriculture, industry and residential use as a current Delta stressor).

[7] Laetz, Cathy, *et al*, "The Synergistic Toxicity of Pesticide Mixtures: Implications for Risk Assessment and the Conservation of Endangered Pacific Salmon," *Environmental Health Perspectives*, Vol, 117, No. 3 (March 2009), available at: http://www.eenews.net/public/25/9960/features/documents/2009/03/03/document_gw_01.pdf. *See also* Goodman, Sara, "Mix of common farm pesticides deadly to salmon – study," *New York Times* (March 3, 2009), available at: http://www.nytimes.com/gwire/2009/03/03/03greenwire-mix-of-common-farm-chemicals-deadly-to-salmon---9960.html.

implemented fully, they will fail to protect fish, because the standards on which they are based are too low.

A NOAA/NMFS study of juvenile fall Chinook salmon similarly found that salmon accumulate significant concentrations of chemical contaminants even during relatively short residence times in estuaries, and that juvenile salmon from polluted environments "exhibit abnormalities ranging from subcellular effects to changes in immune function and growth. In many cases the effects alter physiological processes, such that the potential for survival is reduced." The study further found that because the pollutants suppressed the salmons' immune systems, there was an increased susceptibility to infectious disease.[8]

These studies are consistent with multiple sets of findings from scientists presenting at the 2008 Annual Meeting of the American Association for the Advancement of Science (AAAS), who reported that pesticides that run off the land and mix in rivers and streams *combine to have a greater than expected toxic effect* on the salmon nervous system than the pesticides would have individually. The scientists concluded that "[c]urrent risk assessments based on a single chemical will likely underestimate impacts on wildlife in situations where that chemical interacts with other chemicals in the environment." Scientists also noted that these findings may have relevance for human health because the toxins act on the nervous systems of salmon and humans similarly.[9]

The above research and numerous other studies demonstrate that even where concentrations of contaminants such as pesticides are low and/or legal, they can still kill and injure fish, including salmon, and potentially injure humans. Unfortunately**,** many Delta waterways do not even meet current, inadequate, standards, and are in fact significantly polluted, in many cases well above standards.

In the first comprehensive water quality monitoring study after several years of implementation of the Central Valley Regional Water Board's irrigated agriculture program, surface water monitoring data collected by U.C. Davis and agriculture coalitions revealed that:[10]

- Toxicity to aquatic life was present at 63% of the sites monitored for toxicity, with over half toxic to more than one species.

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[8] Casillas, E., *et al*, NOAA-NMFS-NWFSC, "Estuarine Pollution and Juvenile Salmon Health: Potential Impact on Survival" (2007), available at: http://www.nwfsc.noaa.gov/publications/techmemos/tm29/papers/casillas.htm.

[9] Scholz, Nat, NOAA, "Health effects of pesticide mixtures: Unexpected insights from the salmon brain," (AAAS Annual Meeting, Feb. 2008), available at: http://www.eurekalert.org/pub_releases/2008-02/nh-nsa_1021208.php; *see also* NOAA Office of Communications, "New findings on emerging contaminants: Chemicals in our waters are affecting humans and aquatic life" (AAAS Annual Meeting, Feb. 2008), available at: http://www.eurekalert.org/pub_releases/2008-02/s-nfo020808.php.

[10] Central Valley Regional Water Quality Control Board, "2007 Review of Monitoring Data: Irrigated Lands Conditional Waiver Program" (July 13, 2007), available at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/monitoring_data/staff_monitoring_data_analysis/2007_monitoring_data_report/index.shtml (covering monitoring conducted May 2004 - Oct. 2006). *See also* "Data Sources for Organochlorine (OC) Pesticides in the Central Valley," available at: http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/central_valley_organochlorine_pesticide/index.shtml.

- Pesticide water quality standards were exceeded in over half of the sites, many for multiple pesticides.
- Standards for one or more metals were violated at two-thirds of the sites monitored for metals.
- More than 80% of the sites tested exceeded standards for general water health (dissolved oxygen, pH, salt and total suspended solids).
- Human health standards for bacteria were violated at 87% of monitored sites, demonstrating that the harm we do to the Delta does not extend solely to fish populations.

The State Water Board has prepared a statewide, detailed, interactive map of impaired surface waters that provides additional information the extent of contamination in the Delta and environs.[11] Pesticides and metals are the top causes of water body impairment in the state.[12]

This pollution is causing clear disturbances in Delta ecosystem health. For instance, University of California studies of bellwether species such as striped bass found that *all* of the fish tested from Central Valley waters all had at least two distinct problems with gastric inflammations, parasitic infestations, infections and/or liver lesions. These findings were consistent with earlier work that found nerve damage and developmental abnormalities among newborn bass. Scientists attributed these problems to a chemical stew of pesticides, herbicides and other contaminants in Delta waters.[13] In fact, pesticides are so ubiquitous in the area that a USGS study found two nervous system pesticides in all *rainfall* samples collected around Modesto.[14]

Again, even legal concentrations of contaminants can kill and injure fish; *illegally* high concentrations are an even more certain death sentence. Just as we should grant to ecosystems in law the right to *sufficient* water flows, so should we ensure that our water laws ensure that ecosystems enjoy *clean* water flows, which will benefit fish and wildlife as well as humans.

In light of this information, the Council should consider and recommend significant enhancements to the implementation, enforcement, and (as needed) language of state water quality law and regulations to ensure that California achieves its goal of clean water. For example, citizen suits – a critical element of the federal Clean Water Act for decades and one of the keys to its effectiveness – should be made part of Porter-Cologne to improve compliance.

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[11] State Water Resources Control Board, "2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report)," available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

[12] State Water Resources Control Board, "California 2006 303(d) List: Total Number Pollutants Listed by Pollutant Category," available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/stats_2006_303dlist.xls.

[13] "Baby Fish In Polluted San Francisco Estuary Waters Are Stunted And Deformed," *Science Daily* (Dec. 23, 2008), available at: http://www.sciencedaily.com/releases/2008/12/081209100940.htm; *see also* Thompson, Don, Associated Press, "Chemicals Become Focus for Researcher Studying Delta's Decline" (Jan. 2, 2006), available at: http://www.watershedportal.org/news/news_html?ID=483.

[14] Zamora, Celia, *et al*, USGS, "Diazinon and Chlorpyrifos Loads in Precipitation and Urban and Agricultural Storm Runoff during January and February 2001 in the San Joaquin River Basin, California," Water–Resources Investigations Report 03-4091 (2003); available at http://pubs.usgs.gov/wri/wri034091/wrir034091.pdf.

Stronger implementation and enforcement provisions also should be incorporated immediately into polluted runoff discharge controls. As noted above, the current agricultural runoff "waivers" are clearly failing (even as a first step) to stem the tide of pollution in the Delta; enhanced controls are inevitable and should be put in place now. Similarly, stronger controls on the pollution of groundwater – often directly linked to and impacting surface water – need to be enacted and enforced statewide.

Finally, water quality criteria need to be reevaluated and tightened to fully reflect the synergistic effects of pollutants.

These are just some of the examples of updates that need to be made to ensure that the state's waterways flow with clean, abundant water. We look forward to providing more detailed analysis in future communications to the Council.

* * *

Thank you for the opportunity to provide these comments. We look forward to working with the Council to safeguard California's waterways and ensure clean, abundant waters for the benefit of California's people and natural world.

Regards,

Linda Sheehan
Executive Director

attachments

ATTACHMENT A

LETTER FROM CCKA TO LITTLE HOOVER COMMISSION, "STRATEGIES TO IMPROVE WATER GOVERNANCE IN CALIFORNIA" (JUNE 2009)

CALIFORNIA COASTKEEPER ALLIANCE
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June 23, 2009

The Honorable Daniel Hancock, Chair and Commissioners
Little Hoover Commission
925 L Street, Suite 805
Sacramento, CA 95814
VIA FACSIMILE AND ELECTRONIC MAIL

Re: "Strategies to Improve Water Governance in California"

Dear Chair Hancock and Commissioners:

On behalf of the California Coastkeeper Alliance (CCKA), which represents 12 Waterkeepers from the Oregon border to San Diego, I welcome the opportunity to submit these comments on the Little Hoover Commission's (Commission) investigation into improving the efficiency, transparency and accountability of California's water governance system. CCKA advocates regularly at the state level in support of clean, abundant water flows in our waterways and sustainable water supplies.

CCKA agrees with the invited speakers at the April 23rd hearing that California's water governance system is inadequate to meet the challenges of continued growth, climate change, and decades of overdrawn water systems, continued pollution, and wishful thinking about the volume of water diverted. Rather than pulling together to solve these challenges, which are in everyone's interest to resolve satisfactorily, stakeholders to date have worked at cross-purposes, to no one's benefit. The state's hesitancy in charting a clear path to sustainable water supplies, developed in an accountable and effective manner, exacerbates this "all parties for themselves" culture. Only clear leadership, based on science and sound legal principles and informed by full facts, will harness our collective energy and move us, together, toward a result that benefits all.

In brief, we respectfully provide the following recommendations:

- First, we urge the Commission to examine closely and update the foundational assumptions on which the current water governance system rests. The current system separates out environmental water needs and relegates them to second tier status, below essentially all human uses. This directly conflicts with ecological science and associated evolving ethics, which demonstrate that the needs of humans and their environment cannot be separated. The law must reflect the science; **legal water rights must be developed, allocated and enforced to support water needs for healthy ecosystems**.

- Second, specific actions can and should be taken under existing law to support the *needs* – as opposed to wants – of water users, including the environment. While California's water governance system lags far behind most other states in terms of effectiveness and accountability, and essential groundwater regulation has yet to be instituted, still **California's leadership can and must make full use of numerous, existing laws that could lead the state toward significantly enhanced, clean water flows and supplies** while the water rights system is being updated. These include laws prohibiting the "waste and unreasonable use" of water, and laws calling on the state to "exercise its full power and jurisdiction to protect the quality of waters in the state from degradation."
- Finally, at all stages of these efforts, **California must significantly change its relationship with water, by refocusing its attention and water-related investments toward proven conservation, reuse and green development strategies that make the most of every drop and reduce the state's carbon footprint**. The state must move away from continued reliance in massive, failed water infrastructure projects and invest primarily in strategies that will create a truly sustainable water and energy future.

Each of these issues is discussed further below. We look forward to expanding upon these comments further with you and your staff, in support of water laws that reflect and serve our waterways.

WATER GOVERNANCE MUST BE FOUNDED ON WATER RIGHTS FOR ALL USERS, INCLUDING THE ENVIRONMENT

The Commission's Charge Should Be Expanded to Identify a Governance System That Fully Supports the Well-Being of Both Humans and Environment

Thoughtful testimony has already been provided to the Commission on a number of specific water governance strategies, and the Commission has excellent access to the many additional, thorough studies on actions that the state might take to address our collective water challenges. We would be pleased to work with the Commission and its staff on reviewing any such particular proposals. However, our comments today focus primarily on advocating that the Commission start by taking a step back, to allow for a wider view of the problem being addressed and the underlying assumptions that have led the state to the significant water challenges we now face.

This step back involves starting with a look at the Commission's self-described charge as "reviewing governance issues around the supply and management of water resources at the state level." By focusing on the "supply and management of water resources," the Commission runs the risk of seriously limiting its resulting analysis.[1] Californians face water challenges

[1] As an additional issue, it is virtually an impossible task to ensure "efficiency, transparency and accountability" with respect to water issues by limiting the analysis to *state* operations. Given that the existing state water governance system is intricately bound up with federal and local water governance systems, the Commission will succeed only if the governance system is viewed as a whole, rather than piecemeal. Though the Commission may choose to limit its recommendations to changes in state governance, the impacts on the system writ large must be carefully considered in making such recommendations.

unprecedented in the state's history, with climate change and population pressures only increasing the overall sense of urgency. The unrecognized assumptions underlying the articulated problem statement – *i.e.*, that we can "supply" and "manage" our "water resources" out of our current predicament – are in fact what drove us to the urgent discussions at hand. Articulating the problem we are trying to solve with the same language and assumptions that led us to over-use, over-drain, and increasingly pollute our waterways will impede us from envisioning a better future.

Two foundational assumptions in the above-described charge merit examination if we are to comprehensively define the problems to be addressed. First, the assumption that "governance" means "managing water resources" ignores the fact that it is largely our own behavior, not that of the waterways, that we must manage. How we currently view and use water is of enormous importance in how we govern that use. By assuming that our governance system is based on managing the water, and downplaying the greater relevance of managing ourselves, the resulting analysis may unnecessarily devalue and ignore otherwise potentially effective water governance options.

Second, waterways are not by definition our personal "resources" to do with as we please, with no thought to the consequences until the health of the waterways has severely deteriorated. Like the assumption that we must manage our waterways to better behavior, this assumption that waterways are first and foremost our "resources" similarly relegates waterways to second-tier status, when in fact their health is tied closely to our own. The state's waterways flourished before human inhabitants arrived in significant numbers, and their good health has led to our prosperity. Conversely, the ecosystems' declining health is now similarly signaling growing challenges to human welfare. Ecological science, which has evolved primarily over the last several decades and was in its pre-infancy at the time our water laws were being developed, shows increasingly that our own health and welfare is inextricably *and equally* bound up in the health and welfare of the state's natural ecosystems. This information should be reflected in the Commission's charge, to ensure that a comprehensive assessment is made that protects both human and environmental health.

A clear understanding of the problems we are trying to solve, and the assumptions that we are making in solving them, is essential to ensure that we identify the full range of governance options and select the most effective from among those. **We recommend, therefore, that the Commission expand its charge to address more generally the issue of *developing a governance system in California that will support a sustainable water relationship between humans and the environment, one that ensures the long-term well-being of all.***

To Ensure the Well-Being of Humans and the Environment, Legal Water Rights Must Be Allocated and Enforced on Behalf of the Environment

Current, generally unstated (indeed, unrecognized) Pinchot-vian assumptions about controlling the environment for the "service of man" formed the foundation for 20th-century water governance. These assumptions are now so ingrained in our water governance system that we take them for granted as truth. But they were and are merely assumptions, and in fact now

directly conflict with modern science that demonstrates that "[w]hen we try to pick out anything by itself, we find it hitched to everything else in the universe." To be effective, the law must reflect modern ecological science and its ethical precepts, about which Muir presciently wrote. Just as a state cannot pass a law against gravity, so it cannot effectively rely on a water governance legal system that ignores the science of ecosystem relationships, which necessarily include the ecosystems' human inhabitants.

The steep decline in Bay-Delta Estuary health and accompanying statewide water supply challenges, exacerbated by anthropogenically-caused climate change, bear witness to the increasing need to recognize in law the scientific links between ecosystem and human health. Despite hundreds of millions in public funds spent on restoration efforts, sentinel fish populations are now crashing so fast that scientists are throwing up their hands in despair. As a result, 2008 marked the first year in California's history that salmon fishing was shut down, a closure inauspiciously continued into 2009. And still rivers that feed the Estuary continue to be over-allocated and over-drawn, with no clear path for making hard decisions about water "rights" that may soon be as dry as the paper they are printed on.

Science now shows that to live sustainably, which means *within our limits*, we must respect the role of thriving ecosystems in ensuring our own welfare, and in particular we must respect the benefits that we receive from healthy waterways. The statement of the Winneman Wintu tribe that "the salmon are our relatives, are sacred, and necessary for the continuation of life"[2] reflects this scientific and ethical baseline. Having ignored this baseline as a state for so long, it is not particularly surprising that our many years of draining the rivers and poisoning our wells have come back now to impact us directly. The environment can absorb such actions up to a point, but eventually will react. A potentially critical mistake may have been in assuming that we can continually innovate our way out of any difficulties arising from such environmental reactions. Given our recent track record, that is a bet that California cannot afford to make. We need to take a new path that reflects modern science and sensibilities.

One key step in implementing this new direction is to re-examine and update our "environmental protection" laws and policies to reflect modern scientific and ethical principles that respect the rights and benefits of healthy ecosystems. Because they have generally been based on the mistaken "people-over-nature" foundation, and on outdated assumptions about our ability to "manage" our environment, our unidirectional water laws have had one-way results – toward more environmental degradation. Because their foundations generally were flawed, their good intentions have been relatively easily thwarted, leading to our current predicament. Even the Endangered Species Act (ESA), which respects all creatures' rights to exist, is only used to try to save species on the brink of extinction. ESA is a poor proxy for sustainable water planning, and has resulted in disruptive, court-ordered changes in water deliveries that serve neither people nor environment. Moreover, even where ESA is used properly, such as in the recently-released NMFS biological opinion regarding the impacts of Central Valley pumping operations on endangered and threatened species,[3] legislative attempts to erase those gains

[2] *Available at*: http://www.earthjustice.org/news/press/2008/judge-tosses-biological-opinion-for-salmon-and-steelhead-in-california.html.

[3] *See* http://swr.nmfs.noaa.gov/ocap.htm (further illustrating the far-reaching impacts of our actions, the NMFS opinion finds that Central Valley water pumping is in fact driving *killer whales* to extinction).

predictably occur as the people affected by poor state planning and laws attempt to eviscerate ESA's mandates.[4]

Currently, ecosystem needs are addressed only indirectly, through such methods as conditions in permits, requirements to prevent "waste and unreasonable use," Water Code Section 1707 water transfers, the public trust doctrine, and ESA application. None of these otherwise important tools are actual water *rights*, and all mistakenly assume that that the larger ecosystem can be manipulated to the primary benefit of only one ecosystem inhabitant (humans), with little appreciable overall ecosystem effect. As a result, ecosystem water needs are consistently relegated to a tangential role in state water planning, until the ecosystems or their non-human inhabitants are at the brink of collapse. That is when the ESA hammer falls – abruptly, with little foresight, and often too late.

Unless California is willing to write off fish, whales, and other wildlife for our children and grandchildren, California needs a legal system that allows the state to plan effectively for the water needs for *both* Californians and California ecosystems. The dangerously well-trod path of "use, overuse, environmental decline, then hasty and unplanned reaction" can begin to be broken by granting ecosystems, including fish, the right to be at the planning table from the beginning, at a level equivalent to human water users – rather than at the end when the damage is done. **If water rights are to be the measure by which water is allocated in the state, then ecosystems also must be granted water rights, enforced by independent legal guardians representing the ecosystems.**

Formalizing the rights of ecosystems in law on par with other water uses will implement the desired *jurisprudence*, or legal philosophy, of respect for the inherent rights of all to exist, thrive and evolve in this state. There is growing precedent for this path. Communities around the United States and the world already are passing local laws that create an "enforceable right of natural communities and ecosystems to exist and flourish" within the community's boundaries.[5] California can similarly adopt state water laws that grant enforceable water rights to ecosystems, allowing us to better plan our collective, chosen, sustainable water future.[6]

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[4] For example, a recent Rep. Nunes (Visalia) amendment to HR 2847 would have removed funding for court-mandated protections for endangered salmon; it was defeated but only in an extremely close June vote.

[5] *See, e.g.*, Revkin, Andrew, "Ecuador Constitution Grants Rights to Nature," *New York Times*, (Sept. 29, 2008), *available at* http://dotearth.blogs.nytimes.com/2008/09/29/ecuador-constitution-grants-nature-rights/.

[6] In examining water governance, the Commission to date has focused primarily on water supply and water rights issues, but water quality is of equal importance to the health of the state's waterways. For example, the nation's leading researchers have concluded that salmon die when exposed to combinations of pesticides that appear harmless individually, exposing major flaws in our current, pollutant-by-pollutant regulatory system. (*See, e.g.*, Laetz, Cathy, *et al*, "The Synergistic Toxicity of Pesticide Mixtures: Implications for Risk Assessment and the Conservation of Endangered Pacific Salmon," *Environmental Health Perspectives*, Vol, 117, No. 3 (March 2009), available at: http://www.eenews.net/public/25/9960/features/documents/2009/03/03/document_gw_01.pdf; *see also* Goodman, Sara, "Mix of common farm pesticides deadly to salmon – study," *New York Times* (March 3, 2009).) Unfortunately, contaminants on an individual basis regularly exceed safe limits, increasing the danger to salmon and other species further. For example, toxic contamination is so ubiquitous that a USGS study in the Central Valley found nervous system pesticides in all *rainfall* samples collected. (Available at http://pubs.usgs.gov/wri/wri034091/; *see also* http://www.delta.dfg.ca.gov/srfg/news/SJ_Basin_Pesticide.pdf.) Just as ecosystems have the right to sufficient water flows, so do they have the right to clean water flows, an issue that should be examined as part of the Commission's water governance charge.

Water Needs and Sources Should Be Identified to Support Legal Water Rights for Ecosystems

Legal water rights for ecosystems must be paired with identified water sources. Given the significant over-allocation of water rights in the state on paper, and the unknown amount of water diverted under riparian and pre-1914 rights, this task will be complex and take time. It is not, however, insurmountable in light of the numerous existing legal tools that the state could use if it chooses to plan wisely, rather than continue to react to the courts as the effective arbiters of and decisionmakers for the state's water policies.

The process for establishing ecosystem water rights could begin immediately with the needs of fish, which have been extensively studied and could act as a proxy for ecosystem health until the larger needs of water ecosystems are compiled and/or determined. Significant research has been done over the years in assessing overall ecosystem needs, which could be compiled and assessed for key waterways on a prioritized basis. Legal water rights supporting these water needs could then be accounted for through such options as reviewing unexercised rights, making "waste and unreasonable use" determinations, conducting adjudications, working with the federal government regarding effective allocation of federal water rights, assessing rights and sources associated with "new" water, and taking advantage of numerous other strategies. Formalizing water rights for ecosystems in this way will ensure that waterway needs are considered up front, that planning is therefore effective, and that water is shared to the maximum benefit of the state as a whole.

The resultant ecosystem water rights would be overseen and enforced by *independent* (perhaps court-appointed) legal guardians who would act as advocates for their ecosystem clients. The state could develop a process for selecting and funding (*e.g.*, through fees on water diversion and use) such independent guardians to implement and enforce ecosystem water rights. Given the state's long experience with the use of guardians in other legal contexts, extension of the concept to ecosystems should be relatively straightforward.

THE STATE MUST FULLY IMPLEMENT EXISTING WATER LAWS DESIGNED TO PROTECT THE HEALTH OF THE STATE'S WATERWAYS

California faces uniquely complex and difficult challenges in ensuring a sustainable supply of clean, abundant water throughout the state. These challenges are not insurmountable, though they cannot be met without first reconciling California's existing "water management" façade with the reality of how little we truly know about how water is used and moved in the state, despite some strong laws that could have led us down a different path. Immediate implementation of *existing* water laws is impeded by the following facts, among others:

- The face value of water rights in the state exceeds the amount of actual water by many times,[7] and any figures calculated to date are almost certainly far too low given the dearth of information on riparian and pre-1914 appropriative rights.

[7] *See, e.g.*, State Water Resources Control Board, *Water Rights within the Bay/Delta Watershed* (Sept. 26, 2008), copy separately provided to the Little Hoover Commission.

- California's state water agencies cannot report on how much water is actually being used, where it is being used, where it is being diverted to, how much is being diverted, or how many diversions are illegal.
- Where it does have such data, the State Water Board estimates that the number of illegal diversions may be over 40% of the number of active permits and licenses, the use of which also fails to comply with the law in many cases. Enforcement authority and resources are extremely limited, and violations rarely if ever receive a meaningful state response.
- The state has no information on the status of many water rights; *i.e.*, whether they are active or may have expired due to lack of use.
- Implementation of the state mandate to prevent "waste and unreasonable use" of water (Water Code Section 275[8] and Article X, Section 2 of the California Constitution[9]) has been sparse to essentially nonexistent, leaving California's water management to be driven down an unsustainable path by "first in time" and "use it or lose it" conventions.

These gaps and deficiencies in implementation must be redressed as soon as possible. Full implementation of existing law is essential if California is to responsibly address the state's growing water challenges. We cannot solve our water problems without defining the scope of them and gathering the information needed to identify the most productive solutions. We also cannot solve them without enforcing the law rigorously and immediately against violators who illegally take and/or waste the public's water. This is true for both water supply and water quality, which go hand-in-hand.

In addition to seeking full implementation of existing water laws, we suggest that this Commission re-think "business as usual" and consider new, core water law reforms that will allow us to successfully achieve clean, abundant water for ourselves and the environment. Several such reforms were suggested by some of the panelists at the March 10th Senate Natural Resources and Water hearing, "Overview of California Water Rights Laws"; these include:

- Actively review water use in the state through the lens of Water Code Section 275 and Article X, Section 2 of the California Constitution, and amend water law, regulations and policy as needed to ensure that the mandates of these provisions are met;
- Develop and implement an effective, mandatory process to regulate the use of groundwater throughout the state;
- Implement a sustainable funding stream for state oversight of water diversion and use;

[8] Water Code Section 275 reads: "The department [of water resources] and [the state water resources control] board shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this state."

[9] California Constitution Article X, Sec. 2 reads: "It is hereby declared that . . . the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water . . . This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained."

- Enact the public trust doctrine in the state Constitution;
- Mandate, with enforcement tools, the reporting needed to determine the scope, rate and method of all surface water and groundwater diversion and use statewide; and
- Consider "bundling" permits (flow, storage, water quality) to ensure that the use of water protects water quality as well. Water should be as clean, or cleaner, when returned to the public after its use than before its diversion.

Such reforms elevate the importance of establishing an aware and responsible relationship with water. They share a foundational (though not necessarily explicit) assumption that the *correlative rights doctrine*, currently associated with riparian surface water and overlying groundwater rights, should be considered as extending to all of California water law. The rights of all water users, including ecosystems, are in reality correlative, or linked, particularly as the amount of clean water available for use grows scarcer. As demands grow and supply shrinks in the face of climate change and other challenges, we will all need to better share the water, consistent with this doctrine.

In a broader sense, the jurisprudence that such reforms reach towards, and which we encourage the Commission to adopt, rests in the ***inherent rights of all users – including the larger ecosystem – to exist, thrive and evolve.*** This goal in application may allocate more or less water than individual users currently claim. But it is better to plan ahead for inevitable changes in water allocations than to be forced into them abruptly by continued environmental disrespect and degradation, the results of which we are seeing with the repeated court decisions that have served as the state's *de facto* water "planning" process.

CALIFORNIA MUST INVEST ITS ATTENTION AND FUNDS ON SUSTAINABLE, LOW-ENERGY WATER STRATEGIES, RATHER THAN MORE DESTRUCTIVE, MASSIVE INFRASTRUCTURE PROJECTS

The role of "new," localized water supplies, such as from conservation, recycling and local stormwater capture ("green infrastructure"), in achieving sustainable water governance should merit more attention as the Commission's work unfolds. The Governor's Climate Action Team has found that climate change could reduce California's snowpack one-third by 2060. Developing sustainable, local water supplies and any associated water rights now (and, of course, protecting the quality of the waters we have) will be necessary to our adaption to inevitable natural and other water supply cuts. Such actions are also essential to accounting for the water necessary to support the water rights allocated to the environment.

Our developing water supplies should also be energy-efficient, to avoid exacerbating the problems associated with climate change and to meet the state's greenhouse gas reduction goals. The effects can be significant; for example, the California Energy Commission found that water management consumes 19% of the state's electricity generated every year. If our water sources are not sustainable from an energy and climate change perspective, they will not be sustainable from water supply perspective.

In an August 2008 report,[10] the Los Angeles County Economic Development Corporation (LAEDC) ranked conservation and "local stormwater capture" as the most cost-effective, energy efficient, relatively immediate water sources. By contrast, as the attached LAEDC chart[11] attests, ocean desalination using current technology ranked lowest on the list of water supply strategies in terms of greenhouse gas emission impacts. "Surface storage" ranked *lowest* overall as a cost-effective, drought-proof, reliable, energy-efficient water source; it also exacerbates the damage done to date to the integrity of California's waterways. The state's AB 32 Scoping Plan promotes conservation, stormwater capture/reuse, and recycling as energy-efficient alternatives that can create *millions of acre-feet* of water "new," local water supplies; these strategies should be significantly encouraged.

California can and should focus its water investments, and prioritize its water rights, on water supply solutions that advance the state's overall water and climate change goals, rather than impede them. State law and policy, including water rights, should both encourage energy efficiency and discourage energy inefficiency in water investments, consistent with preventing the waste and unreasonable use of the water used in those investments. Careful attention to the overall impacts of our water investment strategies is essential to achieve our goal of clean, abundant water for both humans and ecosystems as a whole.

CONCLUSIONS

California's water governance system, a complex maze of federal, state, and local statutes, regulations, agreements and contracts, has been cobbled together over many years, often in reaction to court decisions. There historically has been little in the way of statewide leadership and careful water planning; rather, the "rush to water" has resembled most the rush to gold that accompanied it. The task before the Little Hoover Commission will involve embracing this long-missing leadership role on water. To be most effective, the Commission should envision and chart out a planned water future, with a sound foundation rooted in the rights of California ecosystems and their human inhabitants to flourish and evolve. Tinkering with the strands of the existing "governance" system will at best buy a little time, and at worst will seduce participants into believing that action has been taken, while precious time to make meaningful strides towards clean, abundant water ticks by.

Though there are admittedly numerous challenges facing us, we can choose to see challenge as opportunity, which Thomas Edison wryly noted is "missed by most because it is dressed in overalls and looks like work." Spending more money without reform will not solve our water problems, as attested by the billions spent to date to little effect. A serious commitment to working for major reform, along with the will and funding to achieve it, are essential if we are to live within our natural water budget.

As we described in our comments to the Little Hoover Commission last year during the State Water Board governance review, is relatively easy to get caught up in the minutiae of the

[10] LAEDC, *Where Will We Get the Water? Assessing Southern California's Future Water Strategies* (rev'd Aug. 14, 2008); available at: http://www.laedc.org/sclc/studies/SCLC_SoCalWaterStrategies.pdf.
[11] *Id*. at 2.

state's increasingly complex water problems and policies. We urge this Commission instead to see the larger picture – ensuring clean, abundant water for reasonable and beneficial needs, including legal water rights that support healthy flows of clean water for living, thriving waterways. We must recognize in law what exists in fact – that our state as a whole, including our water ecosystems and fish, cannot be healthy without formal recognition of the water rights and needs of all.

We look forward to working with the Commission to take on this task and protect the water and waterways of California, for all the life that benefits from them. Thank you for the opportunity to provide these comments.

Best regards,

Linda Sheehan
Executive Director
lsheehan@cacoastkeeper.org

enclosure

ATTACHMENT B

LETTER FROM CCKA TO STATE WATER RESOURCES CONTROL BOARD, "REASONABLE USE DOCTRINE" (JAN. 2011)

CALIFORNIA COASTKEEPER ALLIANCE

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Humboldt Baykeeper
Inland Empire Waterkeeper
Klamath Riverkeeper
Monterey Coastkeeper
Orange County Coastkeeper
Russian Riverkeeper
San Diego Coastkeeper
San Francisco Baykeeper
San Luis Obispo Coastkeeper
Santa Barbara Channelkeeper
Santa Monica Baykeeper
Ventura Coastkeeper

January 11, 2011

Charlie Hoppin, Chair and Board Members
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814
c/o Jeanine Townsend, Clerk to the Board
***Via Electronic Mail*: commentletters@waterboards.ca.gov**

Re: 1/18-19/2011 BOARD MEETING – Item #12, Reasonable Use Doctrine

Dear Chair Hoppin and Members of the Board:

The California Coastkeeper Alliance (CCKA) represents California's 12 Waterkeeper organizations, which span the coast from the Oregon border to San Diego. On behalf of the Alliance, we are pleased to submit these comments regarding the "Reasonable Use Doctrine and Agricultural Water Use Efficiency" Report (Report), and associated recommendations on the application of the doctrine to promote more efficient use of agricultural water.

In brief, we welcome this Report as a long-overdue effort to implement the mindful water use strategies embedded in the California Constitution and Water Code. California cannot sustain continued "wasteful" and "unreasonable" uses of water, and we applaud the State Water Resources Control Board's (Board) initiative to proactively implement the Reasonable Use Doctrine to prevent future water system breakdowns.

We particularly support the following findings in the Report regarding the scope and use of the Reasonable Use Doctrine:

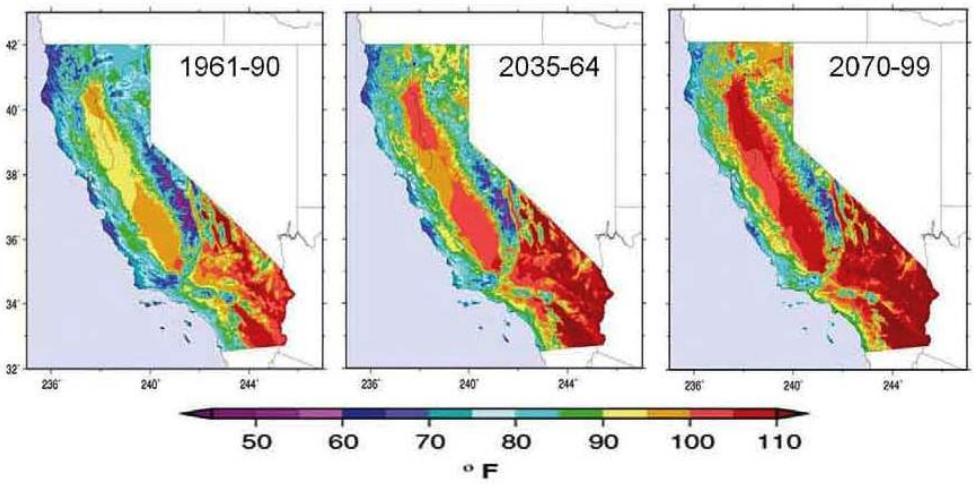
- The Reasonable Use Doctrine is the "cornerstone of California's complex water rights laws."
- "All water use must be reasonable and beneficial regardless of the type of underlying water right," and "[n]o one has an enforceable property interest in the unreasonable use of water."
- The Report's "underlying premise" is that the "inefficient use of water is an unreasonable use of water."
- The Reasonable Use Doctrine "is available prospectively to prevent general practices of inefficient water use," and moreover "can comprehensively address the inefficient use of water in California."
- The Reasonable Use Doctrine may be used "broadly to promote the efficient use of water" and it "can be used to promote [more efficient and reasonable agricultural] practices."

- The "doctrine may apply to an unreasonable method of diversion, even in the absence of any assertion that the diverted water has been wasted or unreasonably used."
- "Inefficient Water Use is unreasonable water use."

We commend the Board's review of the range of agricultural water efficiency practices that could be encouraged through application of the Reasonable Use Doctrine. To further the initiative, we propose adding to the Board's analysis the following suggested considerations:

- While we greatly appreciate the Board's effort to define "using water unreasonably" on page 10, we note that the references to the economic justifiability of efficiency practices should be modified to include an equal or greater consideration of the value of the water and affected ecosystems at stake. The costs of adding water efficiency practices are relatively easy to compute. Calculating the costs of avoiding efficiency is more difficult, which is one of the reasons they tend to be marginalized. As can be seen from the state's ongoing struggles with water supply and water pollution, however, the negative impacts of inefficiency can be far more significant than the costs of implementing more efficient water use strategies. Accordingly, the costs to ecosystems, waterways and water supplies from avoiding efficiencies must be specifically included in a definition of "unreasonable," to put the efficiency practice at issue into context.
- We agree that more efficient irrigation practices can reduce consumptive water use, particularly from reduced evapotranspiration from the crops and soil. One important additional consideration on this point is the impact of climate change, as demonstrated by the projected temperature changes in the Central Valley and Imperial Valley.[1] The significance of using water wisely and of avoiding actions that will result in increased evapotranspiration over time become particularly acute in light of the increased heat that these areas will face in the coming years.

Figure 1. California Historical & Projected July Temperature Increase 1961-2099



Source: Dan Cayan et al. 2009.

[1] California Natural Resources Agency, *2009 California Climate Adaptation Strategy*, Figure 1 (Dec. 2, 2009), available at: http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF.

- Greater conservation also will allow the state to *choose*, on behalf of the best interests of the public and the affected environment, where the water will go – rather than letting wasted water possibly, and possibly not, flow to good use. Moreover, agricultural runoff often contains numerous pollutants that foul much-needed surface water and groundwater sources, as the Report correctly notes. Again, consideration of the full range of benefits of greater efficiencies must be incorporated into the definition of "unreasonable" – including the benefits of cleaner water, not solely additional water.
- In addition to adoption of more efficient water use practices, consideration should be given to the reasonableness of the use of the water generally. The Report specifically chooses not to address the topic of saving water through switching to different crops (or land retirement, which is not mentioned), asserting that this practice "is heavily dependent on market conditions." We urge the Board to consider the broader definition of "agricultural use" in determining what is wasteful and unreasonable. By eliminating whole categories of potential water savings from a "wastefulness" determination due to market forces – which are *not* mentioned in the Constitutional or Code language – the Report makes a *de facto* decision about what is wasteful and what is not. This type of wastefulness assessment should be debated in a public forum in order to ensure appropriate public feedback on the Board's determination the reasonable use of the state's waters – which belong to the people of the state.
- We ask that more deliberation be given to the topic of transfers of conserved water. We have concerns about excluding from this incentive process *only* those water users who are "subject to a waste or unreasonable use proceeding." Given the paucity of water rights staff, even with the new staff increases, active waste/unreasonable use proceedings may take some time to become established practice. This transfer language thus may potentially reward many wasteful water users not subject to these proceedings, an outcome the Report specifically indicates it would like to avoid. To avoid this outcome, each such proposed transfer instead should be evaluated for waste and inefficiency of use before and after the efficiency measures were installed. Only those taking action well above and beyond the desired level of efficiency (and certainly far beyond "wasteful") should be rewarded with the opportunity to sell conserved water. Otherwise, the Board would be approving profit off the sale of the public's water, the use of which was illegal to begin with. Finally, greater attention should be provided to transferring conserved water to waterways (as noted below); the Report is notably quiet on instream flows.
- Focused consideration should be given to ensuring that greater efficiencies and conservation results in *greater flows in waterways*. Greater efficiency should be specifically combined with improved water diversion management to ensure healthier aquatic ecosystems, rather than just more water for increased human uses. Reasonable diversion is another element of the Reasonable Use Doctrine, but one that is only touched on in the Report; we urge the Board to include it more comprehensively as this process moves forward.

Lastly, we agree that a Reasonable Water Use Unit should be created to "enforce the prohibition against the waste or unreasonable use of water," and that this enforcement process should be streamlined to "start with the issuance of a Cease and Desist Order." We welcome the opportunity to discuss these and other issues at the proposed Reasonable Use Summit.

* * *

Thank you for the opportunity to provide these comments, and for your work in preparing this laudable Report. We look forward to participating in the proposed Reasonable Use Summit and working with you to implement its recommendations swiftly.

Regards,

Linda Sheehan
Executive Director

cc: Craig M. Wilson, Delta Watermaster